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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,141	12/05/2001	Alexander Beeck	033275-316	3862

7590 06/21/2004

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EXAMINER	
VERDIER, CHRISTOPHER M	

ART UNIT	PAPER NUMBER
3745	

DATE MAILED: 06/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/002,141	BEECK ET AL.	
	Examiner	Art Unit	
	Christopher Verdier	3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 December 2003* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 3, 2004 has been entered.

Applicants' Amendment dated June 3, 2004 has been carefully considered. Claims 1-5 are pending. Applicants' arguments that amended independent claim 1 defines over Cederwall 4,668,162 and German Patent 198 01 804 because neither of these references discloses that the inspection aperture is arranged essentially in a direction tangentially to the curved flow section curvature of the cooling channel have been considered and are persuasive. However, the pending claims are subject to the grounds of rejection set forth later below, necessitated by the newly added limitations to claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 3/1, 3/2, 5/3/1, and 5/3/2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohtomo 4,992,026 (figures 1-2). Note the component 10 of a fluid flow machine, comprising plural cooling channels 34, 36, 40 for passage of a cooling medium, with the cooling channels comprising at least one curved flow section 36/40 adjacent the unnumbered blade platform, with an inspection aperture 38 through which an inspection of the interior of the component is made possible, with the inspection aperture being arranged essentially in a direction tangentially to the curved flow section curvature. The component is a rotating blade for a turbine, with the inspection aperture being arranged in the neighborhood of the blade tip. The inspection aperture is arranged at the blade tip and has its longitudinal axis essentially perpendicular to the horizontal axis of the fluid flow machine. The recitation in claim 1, lines 4-5 of the inspection aperture "through which an inspection of the interior of the component is made possible", is not considered to define over Ohtomo, because a person's eye with or without the aid of a magnifier would be capable of the inspecting the interior of the component. In addition, and in conjunction with the recitation in claim 2, lines 1-2 of the inspection aperture being dimensioned to enable the introduction of a borescope, these limitations are a function of the size the borescope, and the size of the borescope would determine whether or not it would be able to be introduced into the inspection aperture. A miniaturized borescope have a tiny diameter would be capable of being introduced into the inspection aperture.

Claims 1-2, 3/1, 3/2, 4/3/1, and 4/3/2 are rejected under 35 U.S.C. 102(b) as being anticipated by Glezer 5,603,606 (figures 1-5). Note the component 114 of a fluid flow machine, comprising plural cooling channels 166, 168, 170 for passage of a cooling medium, with the

cooling channels comprising at least one curved flow section 168/170/174, with an inspection aperture 178 through which an inspection of the interior of the component is made possible, with the inspection aperture being arranged essentially in a direction tangentially to the curved flow section curvature. The component is a rotating blade for a turbine, with the inspection aperture being arranged in the neighborhood of the blade tip. The inspection aperture is arranged at the blade tip and has its longitudinal axis essentially parallel to the horizontal axis of the fluid flow machine. The recitation in claim 1, lines 4-5 of the inspection aperture "through which an inspection of the interior of the component is made possible", is not considered to define over Glezer, because a person's eye with or without the aid of a magnifier would be capable of the inspecting the interior of the component. In addition, and in conjunction with the recitation in claim 2, lines 1-2 of the inspection aperture being dimensioned to enable the introduction of a borescope, these limitations are a function of the size the borescope, and the size of the borescope would determine whether or not it would be able to be introduced into the inspection aperture. A miniaturized borescope have a tiny diameter would be capable of being introduced into the inspection aperture.

Claims 1-2, 3/1, 3/2, 4/3/1, and 4/3/2 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent 64-66,401 (figures 1-2). Note the component 1 of a fluid flow machine, comprising plural cooling channels 12, 15, 18 for passage of a cooling medium, with the cooling channels comprising at least one curved flow section 15/18, with an inspection aperture (near 18) through which an inspection of the interior of the component is made possible, with the inspection aperture being arranged essentially in a direction tangentially to the curved

flow section curvature. The component is a rotating blade for a turbine, with the inspection aperture being arranged in the neighborhood of the blade tip. The inspection aperture is arranged at the blade tip and has its longitudinal axis essentially parallel to the horizontal axis of the fluid flow machine. The recitation in claim 1, lines 4-5 of the inspection aperture "through which an inspection of the interior of the component is made possible", is not considered to define over the Japanese Patent, because a person's eye with or without the aid of a magnifier would be capable of the inspecting the interior of the component. In addition, and in conjunction with the recitation in claim 2, lines 1-2 of the inspection aperture being dimensioned to enable the introduction of a borescope, these limitations are a function of the size the borescope, and the size of the borescope would determine whether or not it would be able to be introduced into the inspection aperture. A miniaturized borescope have a tiny diameter would be capable of being introduced into the inspection aperture.

Claims 1-2, 3/1, 3/2, 5/3/1, and 5/3/2 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee 5,797,726 (figures 1-2). Note the component 14 of a fluid flow machine, comprising plural cooling channels 30, 32 for passage of a cooling medium, with the cooling channels comprising at least one curved flow section (in line with aperture 46) adjacent the blade platform 16, with an inspection aperture 46 through which an inspection of the interior of the component is made possible, with the inspection aperture being arranged essentially in a direction tangentially to the curved flow section curvature. The component is a rotating blade for a turbine, with the inspection aperture being arranged in the neighborhood of the blade tip. The inspection aperture is arranged at the blade tip and has its longitudinal axis essentially

perpendicular to the horizontal axis of the fluid flow machine. The recitation in claim 1, lines 4-5 of the inspection aperture "through which an inspection of the interior of the component is made possible", is not considered to define over Lee, because a person's eye with or without the aid of a magnifier would be capable of the inspecting the interior of the component. In addition, and in conjunction with the recitation in claim 2, lines 1-2 of the inspection aperture being dimensioned to enable the introduction of a borescope, these limitations are a function of the size the borescope, and the size of the borescope would determine whether or not it would be able to be introduced into the inspection aperture. A miniaturized borescope have a tiny diameter would be capable of being introduced into the inspection aperture.

Claims 1-2, 3/1, 3/2, 5/3/1, and 5/3/2 are rejected under 35 U.S.C. 102(b) as being anticipated by the brochure "Air-Cooling of Gas Turbine Blades (figure 2, top and bottom righthand blades). Note the unnumbered component of a fluid flow machine, comprising plural unnumbered cooling channels for passage of a cooling medium, with the cooling channels comprising at least one curved flow section adjacent the unnumbered blade platform, with an unnumbered inspection aperture through which an inspection of the interior of the component is made possible, with the inspection aperture being arranged essentially in a direction tangentially to the curved flow section curvature. The component is a rotating blade for a turbine, with the inspection aperture being arranged in the neighborhood of the blade tip. The inspection aperture is arranged at the blade tip and has its longitudinal axis essentially perpendicular to the horizontal axis of the fluid flow machine. The recitation in claim 1, lines 4-5 of the inspection aperture "through which an inspection of the interior of the component is made possible", is not

considered to define over the brochure, because a person's eye with or without the aid of a magnifier would be capable of the inspecting the interior of the component. In addition, and in conjunction with the recitation in claim 2, lines 1-2 of the inspection aperture being dimensioned to enable the introduction of a borescope, these limitations are a function of the size the borescope, and the size of the borescope would determine whether or not it would be able to be introduced into the inspection aperture. A miniaturized borescope have a tiny diameter would be capable of being introduced into the inspection aperture.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (703)-308-2638. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (703) 308-1044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.V.
June 18, 2004

Christopher Verdier
Primary Examiner
Art Unit 3745